

## Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Canceled)
2. (Currently Amended) The coating composition according to ~~claim 1~~ claim 4, wherein the sol-gel matrix is a sol-gel processed xerogel.
3. (Original) The coating composition according to claim 2, wherein the xerogel is formed from doped or undoped tetramethylorthosilane, doped or undoped tetraethylorthosilane, hybrid *n*-propyl-trimethoxysilane/tetramethylorthosilane, hybrid bis[3-(trimethoxysilyl)propyl]ethylenediamine)/ tetraethylorthosilane, hybrid tetramethylorthosilane/*n*-propyl-trimethoxysilane/bis[3-(trimethoxysilyl)propyl]ethylenediamine), or hybrid tetramethylorthosilane /*n*-octyl-trimethoxysilane.
4. (Currently Amended) ~~The coating composition according to claim 1~~ A coating composition comprising:  
a sol-gel matrix and  
a dendrimeric organochalcogeno derivative bound to at least a portion of the sol-gel matrix, wherein the dendrimeric organochalcogeno derivative has the formula:

